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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,656

04/16/2004

Mohan Kalkunte

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8497

32294 7590 07/25/2008  
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EXAMINER

MAHMOUDZADEH, NIMA

ART UNIT

PAPER NUMBER

2619

MAIL DATE

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07/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/825,656	<b>Applicant(s)</b> KALKUNTE ET AL.	
	<b>Examiner</b> NIMA MAHMOUDZADEH	<b>Art Unit</b> 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 13-15 is/are allowed.
- 6) ☒ Claim(s) 5-8, 12, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 5-8, 12,16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopps (RFC 2992, Analysis of an Equal-Cost Multi Path Algorithm, November 2000) in view of Dani et al. (US Patent Publication No. 2004/0064583).

**Regarding claim 5**, Hopps teaches a method of distributing data across a network, the method comprising:

providing a distribution device configured to distribute a set of packets of data across a set of equal-cost paths in the network (Page 1, Abstract lines 1 and 2, disclose the packets routing over multiple path of equal cost); and

distributing each packet in the set of packets across the set of equal-cost paths according to a weighted distribution (Page 1, Abstract lines 1 and 2, disclose the packets routing over multiple path of equal cost) so that at least one of said packets is given greater weight to be distributed across at least one of said equal-cost paths than at least one other of said equal-cost paths (Page 6, lines 17-30, disclosed the selection process of highest weight), but fail to teach said packet weight corresponding to a number of entries stored in a memory. However, Dani et al. teach said packet weight corresponding to a number of entries stored in a memory (Paragraph [0014] discloses a weight buffer that contains weight value associated with the end node ports).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Hopps to include packet weight correspondence to a number of entries stored in a memory of Dani et al. in order to balance the network traffic loads and improve the quality of transmission.

**Regarding claim 6**, Hopps teaches the method of claim 5, wherein the distributing further comprises using a packet attribute from each packet to perform the weighted distribution (Page 6, lines 28-30).

**Regarding claim 7**, Hopps teaches the method of claim 6, wherein the distributing comprises performing a hashing function on the packet attribute (Pages 6, lines 28-32).

**Regarding claim 8**, Hopps teaches the method of claim 5, wherein the distributing comprises obtaining a match between a longest prefix in a first packet and a portion of a first set of instructions in a first compilation of sets of instructions (Page 6,

lines 17-27, packet header is the longest prefix in a packet which is used to get the weight to get to the next hop. The comparison is the selection based on weight information compiled in the route).

**Regarding claim 12**, Hopps teaches the method of claim 5, further comprising updating a compilation of sets of instructions used to perform the weighted distribution, wherein the compilation is updated based on a best-fit algorithm (Page 1, Abstract discloses the changes done and one of the functions of the router is to update and change the routing table accordingly).

**Regarding claim 16**, Hopps teaches a device for distributing Internet protocol packets across a network (Page 1, Abstract lines 1 and 2, disclose the packets routing over multiple path of equal cost), the device comprising:

a set of interface means for interfacing the device with the network (Page 1, Abstract lines 1 and 2, disclose the packets routing over multiple path of equal cost which clearly shows multiple number of interfaces in order to be connected to the network via multiple paths); and

distribution means for distributing a set of packets entering the device through a first interface means in the set of interface means such that packets in the set of packets are distributed across all interface (Page 1, Abstract lines 1 and 2, disclose the packets routing over multiple path of equal cost. The packet has been fed to the router from a port to be able to perform the routing function via multiple paths) means in the set of interface means operably connected to equal-cost paths according to a weighted distribution so that at least one of said packets is given greater weight to be distributed

across at least one of said equal-cost paths than at least one other of said equal-cost paths (Page 6, lines 17-30, disclosed the selection process of highest weight), but fail to teach said packet weight corresponding to a number of entries stored in a memory. However, Dani et al. teach said packet weight corresponding to a number of entries stored in a memory (Paragraph [0014] discloses a weight buffer that contains weight value associated with the end node ports).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Hopps to include packet weight correspondence to a number of entries stored in a memory of Dani et al. in order to balance the network traffic loads and improve the quality of transmission.

**Regarding claim 17**, Hopps teaches the device of claim 16, wherein the distribution means is configured to distribute the packets based on attributes of the packets (Pages 6, lines 28-32).

#### ***Allowable Subject Matter***

3. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. Claims 1-4 are allowed.
5. Claims 13-15 are allowed.
6. The following is an examiner's statement of reasons for allowance: Hopps (RFC 2992, Analysis of an Equal-Cost Multi Path Algorithm, November 2000) in view of Dani

et al. (US Patent Publication No. 2004/0064583) disclose routing techniques including load balancing for routing packets along multiple paths of equal cost.

However, regarding claims 9-11, prior art of record fails to teach, or renders obvious, alone or in combination, a method for distributing comprising using a pointer portion from the first set of instructions to select a second set of instructions from a second compilation of sets of instructions, wherein the first set of instructions includes a first value that specifies how much weight is to be given to each equal-cost path in the set of equal-cost paths in order to distribute data across the network as claimed in dependent claims 9-11 in combination with all limitations of the base claim and intervening claim.

**Regarding claims 13-15**, prior art of record fails to teach, or renders obvious, alone or in combination, a distribution device comprising: a set of ports, a first distribution unit, first lookup unit, the second lookup unit, and the third lookup unit as directly recited and detailed in independent claim 13.

**Regarding claims 1-4**, prior art of the record fails to teach, or renders obvious, alone or in combination, a method of distributing step comprises using a pointer portion from a first set of instructions to select a second set of instructions from a second compilation of steps of instructions, and wherein the first set of instructions includes a first value that specifies how much weight is to be given to each equal-cost path in the set of equal-cost paths.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Callon et al. (US Patent No. 6,643,287) teach Apparatus and method for forwarding encapsulated data packets on a network having multiple links between nodes

Ichinohe et al. (US Patent No. 7,243,258) teach Network system having function of changing route upon failure

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIMA MAHMOUDZADEH whose telephone number is (571)270-3527. The examiner can normally be reached on Monday - Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag G. Shah can be reached on (571) 272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2619

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NIMA MAHMOUDZADEH/

Examiner, Art Unit 2619

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2619